The Ulster Medical Journal, Volume 62, No. 1, pp. 58 – 62, April 1993.

Alcohol-related attendances at an accident and emergency department

K Elizabeth Dowey

Accepted 2 March 1993.

SUMMARY

Using a self-administered alcohol-related questionnaire and the clinical records a survey was made of the prevalence and severity of alcohol-related problems in the accident and emergency department at the Belfast City Hospital. Of 10,410 consecutive attendances during three months, 6,625 completed a questionnaire: 4,349 admitted they took alcohol at some time, 906 men exceeded 21 units weekly, and 490 women exceeded 14 units weekly. The majority of those who drank were under the age of 35 years. Only 182 considered that they might have an alcohol-related problem.

Possible health promotion initiatives for these at-risk patients are considered which might be used specifically in an accident and emergency department.

INTRODUCTION

Excessive alcohol consumption is associated with a wide range of medical, surgical and psychiatric disorders and has been implicated in trauma of every kind. Several studies have shown that a high proportion of emergency department patients have recently consumed alcohol.[1, 2, 3] Alcohol misuse is also at the root of many social problems and can be incriminatory in marital breakdown and child abuse. It is a causal factor in lowered work performance and absenteeism from work, and it undoubtedly contributes to the widespread violence in our community.

Many people in Northern Ireland, particularly young men, drink heavily, and frequently at levels well above the recommended safe limits. The Northern Ireland Strategic Plan 1992-97[4] states that by 1997 the proportion of adults drinking more than the "sensible limits" (up to 21 units per week for males and up to 14 units per week for females) should be reduced to 25% (from 33%) for men and to 7% (from 11%) for women. This may not be an easy goal to achieve in our community but, as health care professionals, we have a duty to address the problem with due concern.

METHOD

During a three month period all patients attending the accident and emergency department, for whatever cause, were asked to fill in a questionnaire about their drinking patterns, their knowledge of the unit system for measuring alcohol consumption, and whether they considered their present level of alcohol consumption harmful to health.

Accident and Emergency Department, Belfast City Hospital, Belfast BT9 7AB.

K Elizabeth Dowey, MB, BCh, MRCP, Consultant in Accident and Emergency Medicine.

A total of 10,410 patients attended during the period of the study, and 6,625 completed the cards. Of the 3,785 who did not, 522 were too seriously ill or injured, 642 were elderly and had difficulty with comprehension, 1,253 were children, 282 were too intoxicated to co-operate, and 1,086 refused.

The following data were then obtained from the clinical record card — age/sex, nature of the presenting complaint, time of attendance, whether the patient was noted either by the triage nurse or the casualty officer to have recently consumed alcohol, and whether they had previous attendances with a similar complaint which was possibly alcohol-related.

RESULTS

This analysis is confined to those patients who completed the questionnaires.

How much do people drink?

Out of a total of 4,349 people who said they took alcohol, 2,435 were men and 1,914 women. 1,320 women and 956 men had never drunk alcohol, and 1,330 women and 1,265 men only drank on special occasions.

906 men stated that they exceeded 21 units, and 490 women exceeded 14 units of alcohol weekly; 264 men exceeded 37 units, and 94 women 25 units weekly.

How often do people drink?

Most people who admitted to drinking alcohol did so only on one or two days per week, usually at weekends, (2,899 men and 1,450 women). A relatively small number, 742 men and 360 women, drank more often than three or four days per week, and very few people drank every day.

Age distribution

Of those who drank alcohol, 19 were under the age of 15 years, 942 aged 15 – 20 years, 1,604 aged 20 – 35 years, 1,342 aged 35 – 50 years, and 542 were over 50 years of age.

Attitudes to drinking

A total of 359 drinkers, (men and women) felt that their drinking was perhaps excessive but only 182 considered that they might have an alcohol problem.

Other factors

During the period of the study 132 patients attended as a result of assaults. Of these 88 were alcohol-related and 72 had injuries involving the head and face, 61 with multiple lacerations requiring sutures and 13 with fractures of the facial bones. Seventy-seven of these attendances were between 9.00 pm and 9.00 am, and 16 people had previously attended with similar alcohol-related injuries. Six males and one female were violent while in the accident and emergency department, requiring intervention of security staff.

Thirty-six people who had been involved in road traffic accidents had recently consumed alcohol but only four of these were the drivers of their vehicles, the remainder being either passengers or pedestrians knocked down.

The association between alcohol consumption and industrial accidents was not

strong. Only one patient seen as a result of a fall at work was noted to have alcohol on the breath. There were 92 alcohol-related falls, either in the street or at home, and of these 29 had been brought in by the ambulance as 'collapse' cases, found lying on the street.

Of patients who had consumed alcohol recently, 108 attended with medical complaints: these included drug overdose (38), abdominal pain (24), chest pain (12), haematemesis (8), fits (5), delirium tremens (4), cirrhosis, liver failure, bleeding varices or alcoholic cardiomyopathy (5), and others (10). Of these, 26 required admission to a general ward, which represents 2·4% of all admissions over the period of the study. In contrast there were 72 alcohol-related admissions to the observation ward, or 14% of all admissions.

In the Belfast City Hospital the approximate cost of occupying an acute medical/surgical bed is £229 per day, for the observation ward £190 per day, and for intensive care £989 per day. Thirty-two of the admissions to the acute units were for 24/48 hours only but the remainder stayed more than four days, which would have cost in excess of £87,500. The cost of the 72 observation ward patients would have totalled £13,680.

In addition to these basic accommodation costs are the numerous X-ray and laboratory investigations which these patients require. As an example, one small group of patients was considered, the assaults involving the head and face. Sixty-three of these had X-rays of the skull and facial bones, at an approximate cost of £1,890. For a significant proportion of patients admitted to the acute units there is also the expense of drugs, and three had added and very significant costs of theatre and intensive care. Patients with alcohol-related illnesses incur a very substantial financial burden on the health service. These hospital attendances are in most cases avoidable.

DISCUSSION

The results of this survey are similar to those of several other national studies. I found that 9% of men and 4% of women were at significant risk. These figures are similar to those of Wilson,[5] who found 14% of males and 3% of females were at significant risk, and to Yates,[6] who found in his accident and emergency department population 7% of men and 2% of women at high risk.

The occurrence frequently of alcohol abuse in the accident and emergency department raises points related to staffing, design and treatment resources. A high proportion of these patients present 'out of hours', when staffing levels are low. In the Belfast City Hospital, 88% of the assaults attended between 9.00 pm and 9.00 am, and 67% were alcohol-related. This compares with Hocking,[7] who found in his survey of patients attending Lewisham Hospital as a result of deliberate physical violence that 82% attended at night and in at least 50% alcohol was a contributing factor.

Of the overall attendances at night at the Belfast City Hospital accident and emergency department, 20% were associated with alcohol. Another Irish study found that 26% of patients attending an accident and emergency department at night had taken alcohol and that they were often not adequately managed.[8] It has also been shown that medical staff under-diagnose problem drinking. Patients in the accident and emergency department often have their drinking problem

overlooked and only their presenting disorder attended to.[9, 10] I would agree with this, and there is a need for integrating alcoholism treatment resources in the accident and emergency service. This is not an easy task. Patients under the influence of alcohol are often noisy, aggressive and abusive. Many are violent to staff and intimidate other patients in the waiting area. They can be uncooperative and pose difficulties with obtaining adequate X-rays, suturing of wounds and applying of plaster casts and splints. Once admitted to a ward they may develop delirium tremens or seizures. Proposed treatment may have to be delayed until they are sober and some may even take their own discharge from hospital before treatment can be given. Following discharge they may damage casts, disturb splintage and often fail to attend for follow-up.

In the accident and emergency environment, where time is often at a premium, preventative medicine tends to be given little attention. Nevertheless this setting could offer the opportunity to both medical and nursing staff to use brief intervention strategies to help people early, before alcohol dependence has become apparent. It has been suggested that treatment of patients with alcohol-related problems is more likely to be successful if it is begun before physical, psychiatric and social problems have developed.[11] The percentage of patients who perceive that they have a problem is low and it is unlikely that these people will seek advice spontaneously; with a careful approach such people could be suitably guided. The Salisbury Alcohol and Drug Advisory Service in conjunction with the accident and emergency department at Salisbury General Infirmary has developed a system of brief counselling by accident and emergency nurses. In the USA, the Maryland Institute for Emergency Medical Services Systems has set up a rather unusual adolescent trauma prevention programme. They have shown that teenagers who are known to have been drinking alcohol would become more cautious about drink driving if they were shown what happens to persons of their own age who are injured in alcohol-related accidents.

In a busy department, time is of the essence and lengthy counselling is not practical. However, the triage nurse, who is the first member of the health care team to come in contact with the patient could, in many instances, provide this initial brief intervention and advice. The first task is to identify the patient whose accident or injury may have been related to alcohol, and then to help this patient make a link or connection between his drinking behaviour and what has happened to him. The second part of the intervention would be the giving of factual information. This could be either verbal facts and figures; for example relating alcohol to the incidence of fatal road accidents or alternatively relating excess alcohol consumption with liver disease, brain damage and various forms of cancer. In addition leaflets such as "Drinking and Accidents" or "That's the Limit" could be given to the patient, or to the relatives.

Apart from the potential benefit from early intervention, knowledge of an underlying alcohol problem would aid more accurate diagnosis and avoid inappropriate investigation. Enormous financial savings could be made within a Health Service which is currently grappling with very serious financial strictures. The results of this survey support the view of Zimberg[12] and Murray,[13] that the accident and emergency department offers a high yield of alcohol-related problems and could be the appropriate setting for the introduction of early intervention techniques. The challenge is now to provide such services.

REFERENCES

1. Holt S, Stewart I, Dixon J, Elton R, Taylor T, Little K. Alcohol and the emergency service patient. *Br Med J* 1980; **281**: 638-40.
2. Yates DW, Hadfield JM, Peters K. Alcohol consumption of patients attending two accident and emergency departments in north-west England. *J Roy Soc Med* 1987; **80**: 486-9.
3. Redfern TR, Rees D, Owen R. The impact of alcohol ingestion on the orthopaedic and accident service. *Alcohol and Alcoholism* 1988; **23**: 415-9.
4. Department of Health and Social Services. A Regional Strategy for Northern Ireland Health and Personal Social Services 1992–1997. DHSS, 1991.
5. Wilson P. Drinking habits in the United Kingdom. *Population Trends* 1980; **22**: 14-8.
6. Yates DW, Hadfield JM, Peters K. The detection of problem drinkers in the accident and emergency department. *Br J Addict* 1987; **82**: 163-7.
7. Hocking MA. Assaults in south-east London. *J Roy Soc Med* 1989; **82**: 281-4.
8. Glynn J, O'Neill F. Social intervention with intoxicated patients seen in an accident department. *J Irish Med Ass* 1974; **67**: 40-2.
9. Solomon J, Vanga N, Morgan JP, Joseph P. Emergency-room physicians' recognition of alcohol misuse. *J Stud Alcohol* 1980; **41**: 583-6.
10. Gordon JJ, Fahey P, Sanson-Fisher RW. Interns' identification of patients' health risks in a casualty department. *Med J Aust* 1988; **148**: 615-9.
11. Advisory Committee on Alcoholism. The pattern and range of services for problem drinkers. London: HMSO, 1978.
12. Zimberg S. Alcoholism: prevalence in general hospital emergency room and walk-in clinic. *NY State J Med* 1979; **79**: 1533-6.
13. Murray RM. Screening and early detection of disabilities related to alcohol consumption. Geneva: WHO, 1977: 89-105.